LEVEL II ENVIRONMENTAL SITE ASSESSMENT LOT 1, BLOCK 4, CHEYENNE AIRPORT ADDITION CHEYENNE, WYOMING

PROJECT NO. 24947002

A Division of
The Terracon Companies, Inc.

LEVEL II ENVIRONMENTAL SITE ASSESSMENT LOT 1, BLOCK 4, CHEYENNE AIRPORT ADDITION CHEYENNE, WYOMING

PROJECT NO. 24947002

PREPARED BY

EMPIRE LABORATORIES, INC.
A DIVISION OF THE TERRACON COMPANIES, INC.

November 8, 1994

Empire Laboratories, Inc.
A Division of **The Terracon Companies, Inc.**
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November 8, 1994

Southwest Partners, Ltd.
Corporate Real Estate Services
2801 East Camelback Road, Suite 105
Phoenix, Arizona 85016

Attn: Mr. Larry LaPrade

RE: Limited Level II Environmental Site Assessment
Lot 1, Block 4, Cheyenne Airport Addition
Cheyenne, Wyoming
Project No. 24947002

Dear Mr. LaPrade:

Empire Laboratories, Inc. (Empire) has been completed a Limited Level II Environmental Site Assessment for the above-referenced property in general accordance with our proposal No. 2094376 dated October 14, 1994. A Phase I Environmental Site Assessment (Phase I ESA) was performed at the subject site by Inberg-Miller Engineers (IME) of Cheyenne, Wyoming. Based upon information obtained by IME and the known historical usage of the site, IME recommended that a Level II Site Assessment be performed. The purpose of the Level II Site Assessment was to 1) monitor for the presence of possible petroleum hydrocarbon contamination along with 8-RCRA dissolved metals, polychlorinated biphenyls (PCBs) and volatile organic compounds (VOCs) and 2) if observed, to assess the significance of such contamination.

Our field services included the completion of three (3) soil borings and installation of three (3) groundwater monitoring wells (GMW) to depths of approximately twenty (20) to twenty-two (22) feet below the surface, collection of water samples, and chemical analyses of water samples obtained from each GMW. Groundwater was observed in the soil borings completed at the site at depths ranging approximately from thirteen (13) to fifteen (15) feet below the surface. Obvious signs of significant petroleum hydrocarbons, 8-RCRA metals, PCBs and/or VOCs were not observed in water samples collected from the site with the exception of 1,1-dichloroethene, 1,2-dichloroethane and trichloroethene observed in GMW No. 1 as well as relatively high levels of tetrachloroethene (TCE) observed in the water sample collected from GMW No. 2. Please refer to the attached engineering analyses report for further details.

Terracon

We appreciate the opportunity to be of service to Southwest Partners on this project and are prepared to assist you with any future environmental engineering concerns at the site. If there are any questions concerning this Limited Level II Environmental Site Assessment report, please feel free to contact us at (303) 484-0359.

Very truly yours,

EMPIRE LABORATORIES, INC.
A DIVISION OF THE TERRACON COMPANIES, INC.

David A. Richer, P.E.
Project Engineer

SAR

Scott A. Rutherford, P.E.
Wyoming No. 6435

11/8/94

DAR/SAR:dmf3

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LIMITED LEVEL II ENVIRONMENTAL SITE ASSESSMENT
LOT 1, BLOCK 4, CHEYENNE AIRPORT ADDITION
CHEYENNE, WYOMING

Terracon

Project No: 20947002
Date: November 8, 1994

1. INTRODUCTION

The purpose of this limited Level II Environmental Site Assessment was to provide information regarding possible environmental risks associated with the subject property based upon known historical usage of the property as well as information contained in a Phase I Environmental Site Assessment (Phase I ESA) report prepared by Inberg-Miller Engineers (IME) of Cheyenne, Wyoming. According to IME's report, "there is a moderate to high risk that the site has been adversely impacted by on-site and/or off-site activities." This was based on the fact that the subject site at one time was utilized as the original Cheyenne airport hangars site as well as the United Airlines maintenance/overhaul facility until 1947. The site presently is a vacant tract of land. It is also our understanding that the Wyoming Department of Environmental Quality/Water Quality Division (WDEQ/WQD) had encountered chlorinated solvent contamination in a private irrigation well located approximately two blocks downgradient relative to the subject property. IME recommended that a subsurface contamination evaluation (Level II Environmental Site Assessment) be performed at the subject site. Southwest Partners (SWP) retained Empire Laboratories, Inc. (Empire) to conduct a limited Level II Environmental Site Assessment at the site located at the northeast corner of Central Avenue and 8th Avenue in Cheyenne, Wyoming. The general location of the subject property is shown as Figures 1 and 2 of Appendix A.

The subject property is described as a tract of land situate in the southeast quarter of the northwest quarter of Section 30, Township 14 North, Range 66 West of the 6th P.M., Laramie County, Wyoming. The subject site consists of the triangular shape property located

north of 8th Avenue, west of Warren Avenue and east of Central Avenue. A site location diagram is included as Figure 3 in Appendix A of this report.

2. PROJECT SCOPE

Empire conducted a limited Level II Environmental Site Assessment at the subject property on October 25, 1994. The purpose of the site assessment was to provide SWP with information regarding possible petroleum hydrocarbon, 8-RCRA dissolved metals, PCBs and volatile organic compound (VOC) contamination of groundwater beneath the subject site. The following tasks were performed in general accordance with Empire's proposal No. 2094376 dated October 14, 1994.

- Completed three (3) soil borings and installed three (3) groundwater monitoring wells (GMW) at the site to obtain information regarding possible subsurface soil and groundwater contamination. The soil borings were completed to depths of approximately twenty (20) to twenty-two (22) feet below existing site grades. The soil borings were drilled as shown on Figure 3 at the southeast and southwest corners of the site as well as along the northeast property line. Soil samples were collected from the soil borings and screened on site with a photoionization detector (PID) using ambient temperature headspace analysis (ATHA).

- The groundwater samples collected from the three (3) GMWs were transported under standard Empire chain-of-custody procedures to Technology Laboratories, Inc. (TLI) in Fort Collins, Colorado for analyses of VOCs, total volatile petroleum hydrocarbons (TVPH), total extractable petroleum hydrocarbons (TEPH), oil and grease, 8-RCRA dissolved metals and PCBs.

- Prepared an engineering report which contains a summary and evaluation of the collected data, conclusions and recommendations.

These tasks were performed in an effort to obtain information regarding the presence of significant petroleum hydrocarbon

contamination, metals, PCB and/or VOC contamination beneath the subject site.

3. SUBSURFACE EXPLORATION

The locations of the GMWs completed at the site are shown on Figure 3 in Appendix A. The GMWs completed as part of this limited Level II Environmental Site Assessment are referred to as GMW Nos. 1 through 3. As seen from Figure 3, the GMWs were placed in a triangle configuration at the site in an effort to obtain a representation of the soil and groundwater profile at the subject site. Soil samples were collected during the subsurface exploration operations using hollow-stem auguring and split-spoon sampling techniques. The methods used to perform the field sampling and soil boring operations are presented in Appendix C of this report.

The borings were advanced with a truck-mounted drilling rig utilizing 3¼ inch inside diameter hollow stem augers. The GMWs were located by Empire from existing property lines using conventional chaining methods. Elevations were taken of the ground surface of each GMW as well as the top of casing (TOC) of each GMW by measurements with an engineer's level and referenced to a temporary bench mark (TBM) as shown on the Site Plan, Figure 3. The accuracy of boring locations and elevations should only be assumed to the level implied by the methods used.

Details of the GMWs are provided on the boring logs included in Appendix B. The GMWs were cased with 2-inch diameter Schedule 40 flush-jointed threaded PVC pipe. The lower 10 feet of the PVC pipe consisted of 0.02-inch slotted screen. The wells were backfilled with No. 10-20 silica sand to approximately 2 feet above the top of the well screen pipe and approximately 2 feet of bentonite clay

pellets were placed above the silica sand. The remainder of the GMWs were backfilled with a non-shrink cement grout material. An 8-inch diameter flush grade locking well cover was placed at the surface of each GMW for protection.

Initial and 24-hour water table levels were measured to obtain information regarding groundwater conditions at the site. Groundwater was observed during the drilling operations and 24 hours after drilling at depths of approximately 13½ to 15 feet below the surface. Development of the GMWs was performed to obtain stabilized groundwater elevations and to estimate the piezometric surface for the site. A groundwater contour map was developed from groundwater elevations observed on October 26, 1994 and is included as Figure 4 in Appendix A of this report. The piezometric surface was estimated using linear interpolations between monitor wells and was based upon groundwater table elevation measurements from GMW Nos. 1, 2 and 3. As illustrated on Figure 4, the groundwater flow was estimated to be in the southeasterly direction. It should be noted local hydrogeologic characteristics such as flow direction and gradient may change due to variations in precipitation, recharge and other conditions not evident at the time of the field exploration.

Boring logs prepared from the field logs are also included in Appendix B. Final boring logs included in this report represent our interpretation of the field logs. These logs show soils encountered, location of sampling and groundwater at the time of the field exploration as well as the cross-section of each GMW. The stratification boundaries shown on the attached boring logs represent the approximate locations of changes in soil types; in-situ the transition of materials may be gradual. During the drilling operations, a geo-environmental engineer from Empire was present and made observations of the soils encountered.

Lithologic logs of each GMW were recorded by the geo-environmental engineer during the drilling operations. At selected intervals, samples of the subsurface materials were taken by means of driving a split-spoon sampler. The split-spoon sampler was cleaned between each use. The hollow stem augers and the split-spoon sampling device were cleaned prior to or between each test boring to reduce the possibility of cross contamination between test borings. Soil samples during the drilling operations were screened on site using a photoionization detector (PID).

Soil samples were collected for ATHA at varying intervals from each soil boring using split-spoon sampling techniques. The ATHA procedure is described in Appendix C. ATHA is a qualitative indicator of volatile organic contamination and should not be construed as a quantitative measure of volatile organic contamination. Boring logs prepared from the field logs along with the PID readings observed during ATHA are summarized in the Log of Borings in Appendix B. As illustrated from the boring logs, organic vapors were observed at one (1) part per million (ppm) in the soil samples collected from GMW Nos. 1 through 3.

4. SUBSURFACE SOILS

Descriptions of the soils encountered in the GMWs are provided on the boring logs which are included in Appendix B. Those descriptions are in general accordance with the General Notes also included in Appendix B. The stratification boundaries shown on the attached boring logs represent the approximate locations of changes in soil types; in-situ, the transition of materials may be gradual. Final boring logs included in this report represent an interpretation of the field logs as well as the cross-sectional construction of the monitoring wells.

Based on the results of the field logs, the subsurface conditions can be generalized as follows.

1. Fill Material. A 3½ to 4 foot layer of fill was encountered at the site. The fill consists of a mixture of gravel, silt and sand with pieces of concrete, brick and clay tile.

2. Sand with Gravel. This granular stratum was encountered below the fill at depths of approximately 3½ to 4 feet below the surface and extends to the bedrock below. The sand and gravel is poorly graded, dense to very dense, and non-plastic in its dry to saturated in-situ condition.

3. Sandstone-Siltstone-Claystone Bedrock. The bedrock was encountered below the sand with gravel stratum and extends beyond the depths explored. The bedrock is part of the poorly consolidated sediments of the Ogallala Formation. In general, the bedrock is highly weathered.

4. Groundwater. At the time of the exploration, free groundwater was encountered at depths of approximately 13½ to 15 feet below the surface. Water levels in this area are subject to change due to seasonal variations and/or irrigation demands on and/or adjacent to the property.

Please refer to the boring logs in Appendix B for a graphical representation of the materials encountered in GMW Nos. 1 through 3.

5. GROUNDWATER OBSERVATIONS

Groundwater was observed during drilling operations at depths ranging from approximately thirteen and one-half (3½) to fifteen (15) feet below the ground surface in GMW Nos. 1 through 3. Installation and development of groundwater monitoring wells was required to obtain stabilized groundwater elevations and to estimate a piezometric groundwater surface for the site. Based on initial and 24-hour groundwater elevation levels encountered at the site, the groundwater directional flow was estimated to be in a southeasterly direction. It should be noted that local

geohydrologic conditions may change due to variations in stratigraphy, precipitation and recharge or other conditions not evident at the time of the field exploration.

6. CONTAMINANT CHARACTERISTICS

A groundwater water sample was collected from each GMW for TVPH, TEPH, oil and grease, 8-RCRA dissolved metals, PCBs and VOC analyses. The groundwater samples were collected from cased and developed groundwater monitoring wells which were installed at the site on October 25, 1994. Copies of TLI laboratory reports for the groundwater samples collected at the subject site are included in Appendix E of this report. The groundwater sample results are summarized in Sections 6.1.

6.1 Groundwater Sample Results

Groundwater samples were collected from the three (3) GMWs on October 26, 1994. The laboratory test results are included in Appendix E of this report. The location of the GMWs are shown on Figure 3 in Appendix A. The groundwater samples were analyzed for TVPH, TEPH, oil and grease, 8-RCRA dissolved metals, PCBs and VOCs.

As shown on the laboratory test results, TVPH, TEPH, oil and grease, 8-RCRA metals, PCBs and VOCs were not observed above the laboratory detection limits in the groundwater samples collected from MW Nos. 1 through 3 with the exception of 15 different VOCs analyzed from a total of 54 VOCs tested. The results of observed VOC concentrations encountered in GMW Nos. 1 through 3 are summarized on Table 1 included in Appendix D. The remaining VOC laboratory test results for GMW Nos. 1 through 3 indicate that the analytes were not observed above the laboratory detection limits.

As seen from Table 1, VOC contaminant concentrations observed in groundwater samples analyzed from GMW Nos. 1, 2 and/or 3 consisted of 1,1-dichlorethyene, 1,1-dichloroethane, 1,1,1,-trichloroethane, 1,2-dichoreothane, trichloroethene, 1,2-dibromoethane, naphthalene, tetrachloreothene, ethylbenzene, total xylenes, 1,3,5-trimethylbenzene, 1,2,4-trimethobenzene, tert-butylbenzene, benzene and toluene. The 15 compounds observed in the VOC, EPA Test Method 8260, in the GMW Nos. 1 through 3 were compared to the Wyoming Department of Environmental Quality/Water Quality Division (WDEQ/WQD) maximum contaminant levels (MCLs). The MCLs were derived from the Federal EPA Groundwater Standards. As seen from Table 1, the drinking water equivalent levels (DWEL) were also used to analyze and compare the concentrations observed from groundwater samples collected from GMW Nos. 1 through 3. As seen from Table 1, four (4) of the fifteen (15) VOC compounds encountered in the groundwater samples collected from GMW Nos. 1 through 3 exceeded the WDEQ MCLs. The compounds which exceeded the WDEQ MCLs were 1,1-dichloroethene, 1,2-dichloroethane, trichloroethene encountered in GMW No. 1 and tetrachloroethene encountered in GMW No. 2. The remaining VOC concentration levels encountered in GMW Nos. 1, 2 and 3 did not exceed the WDEQ MCL or DWEL limits.

Tetrachloroethene, also known as perchloroethylene (PCE) encountered in MW No. 2, is a common industrial solvent used for dry cleaning and/or degreasing. The groundwater standard for PCE is 5 ug/L. That standard is the WDEQ/WDQ MCL limit. The concentration of PCE at 108 ug/L observed in MW No. 2 water sample exceeded the PCE groundwater standard. Based on the groundwater flow direction, it appears that the PCE contamination possibly is migrating onto the subject site from an upgradient source.

Empire contacted personnel with the WDEQ/WQD to ascertain the significance of the level of PCE contamination encountered at the

site. Information pertaining to preliminary groundwater directional flow, levels and locations of PCE contamination encountered at the site, characteristics of PCE, and the possibility of off-site sources impacting the subject property were discussed. A representative with the WDEQ/WQD indicated that the PCE levels were significant, yet the WDEQ has no plans to take action to remediate the contamination. The WDEQ/WQD representative also mentioned that SWP would not be responsible for future site remediation. It is Empire's opinion that the PCE contamination impacting the subject site is caused by an upgradient off-site source, i.e. northwest of the site. It is also Empire's opinion that SWP should not be responsible for groundwater remedial activities if in fact the source of the PCE contamination is from an off-site upgradient facility.

7. CONCLUSIONS AND RECOMMENDATIONS

The following conclusions were drawn from the information obtained during the Level II Site Assessment conducted at the subject site:

1. Organic vapors were observed at one (1) ppm range in the soil samples collected from MW Nos. 1 through 3.

2. Surficial deposits encountered at the site consisted of a silty sand with varying amounts of sand and gravel. These materials are relatively permeable and would allow for relatively rapid migration of groundwater contamination.

3. Groundwater was observed during drilling operations at depths ranging from approximately 13½ to 15 feet below the surface in MW Nos. 1 through 3. The groundwater flow direction for the subject site was estimated to be in a southeasterly direction.

4. TVPH, TEPH, oil and grease, 8-RCRA dissolved metals, PCB and VOCs were not observed above the laboratory detection limits for the water samples collected from MW Nos. 1 through 3 with the exception of 15 of 54 compounds analyzed in the VOC, EPA Test Method 8260.

5. Concentrations of 1,1-dichoroethene, 1,2-dichloroethane and trichloroethene observed in the groundwater sample collected from GMW No. 1 slightly exceeded the Wyoming Groundwater Standards. The source of that contamination may or may not be the subject site. Additional exploration would be required to obtain information regarding the source of the contamination.

6. The concentration of PCE observed in the groundwater sample collected from GMW No. 2 exceeded the Wyoming Groundwater Standard.

7. It appears that the PCE contamination is migrating onto the subject site from an upgradient direction, i.e. the northwest. Additional exploration would be required to confirm this preliminary conclusion.

The following recommendations are made based on information obtained during the Level II Site Assessment conducted at the subject site.

1. Groundwater contained in the uppermost, alluvial aquifer beneath the site should not be used for drinking water or other purposes without treatment.

2. It is suggested that SWP and/or the present owners notify the WDEQ/WQD of the results of this assessment and that PCE appears to be migrating onto the site from an off-site source. Written confirmation should be obtained from the WDEQ/WQD regarding their evaluation of the site.

8. GENERAL COMMENTS

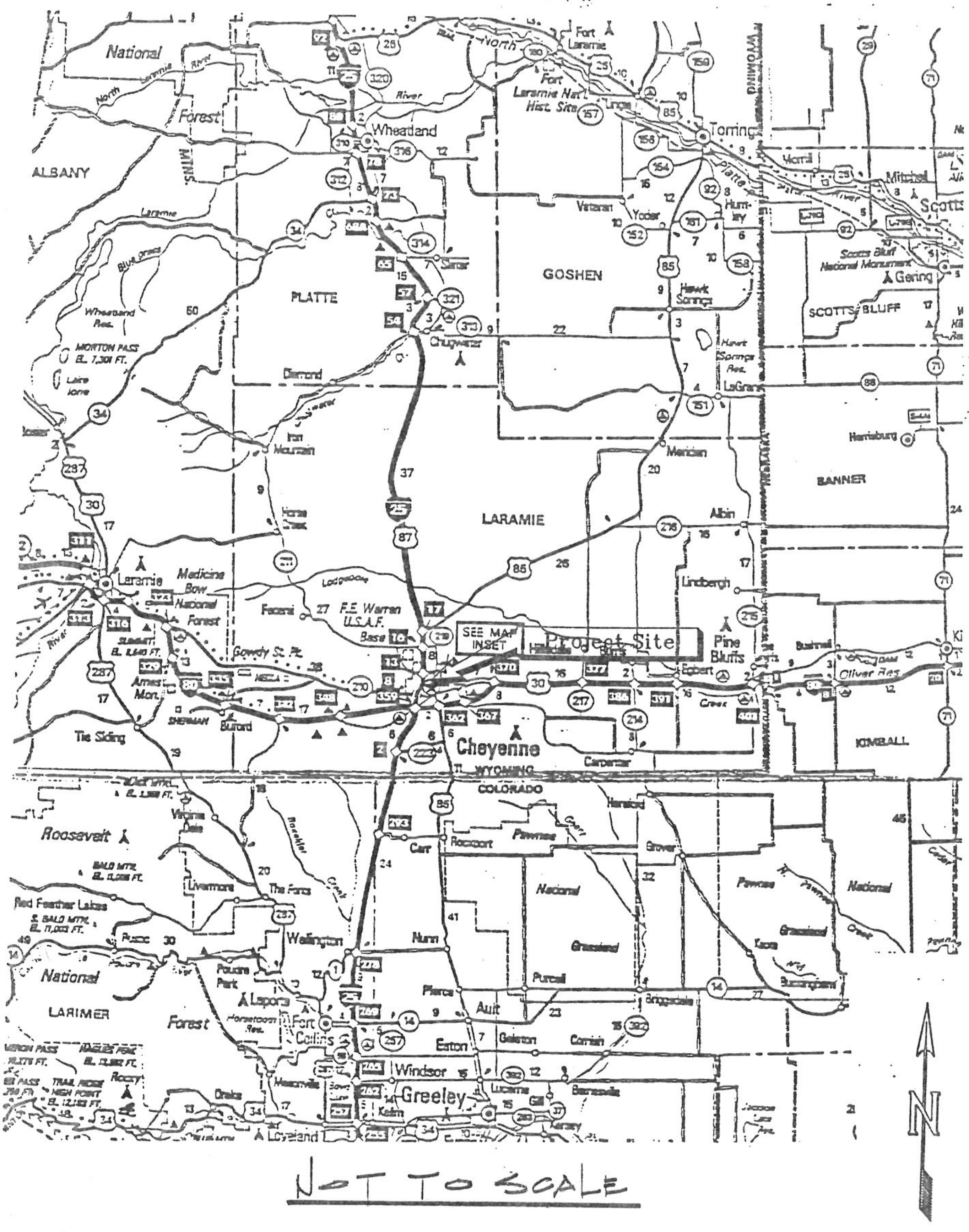
The analyses and opinions expressed in this report are based upon data obtained from water samples collected at the indicated locations. This report does not reflect any variations in subsurface topography, geohydrology or contaminant distribution which may occur between borings and/or across the site.

This report was prepared for the exclusive use of SWP for specific application to the subject project and has been prepared in accordance with generally accepted geo-environmental engineering

practices. No warranties, either express or implied, are intended or made. In the event that any changes in the nature or location of suspected sources of contamination as outlined in this report are observed, the conclusions and recommendations contained in this report shall not be valid unless these changes are reviewed and the opinions of this report are modified in writing by Empire.

APPENDIX A

FIGURES



NOT TO SCALE

FIGURE 1: GENERAL SITE LOCATION PLAN
LOT 1, BLOCK 4, CHEYENNE AIRPORT ADDITION
CHEYENNE, WYOMING

Job # 24947002	Date Nov. 1994	Drawn MR

Empire Laboratories, Inc.
A Division of the
Terracon Companies

E
B
C
D

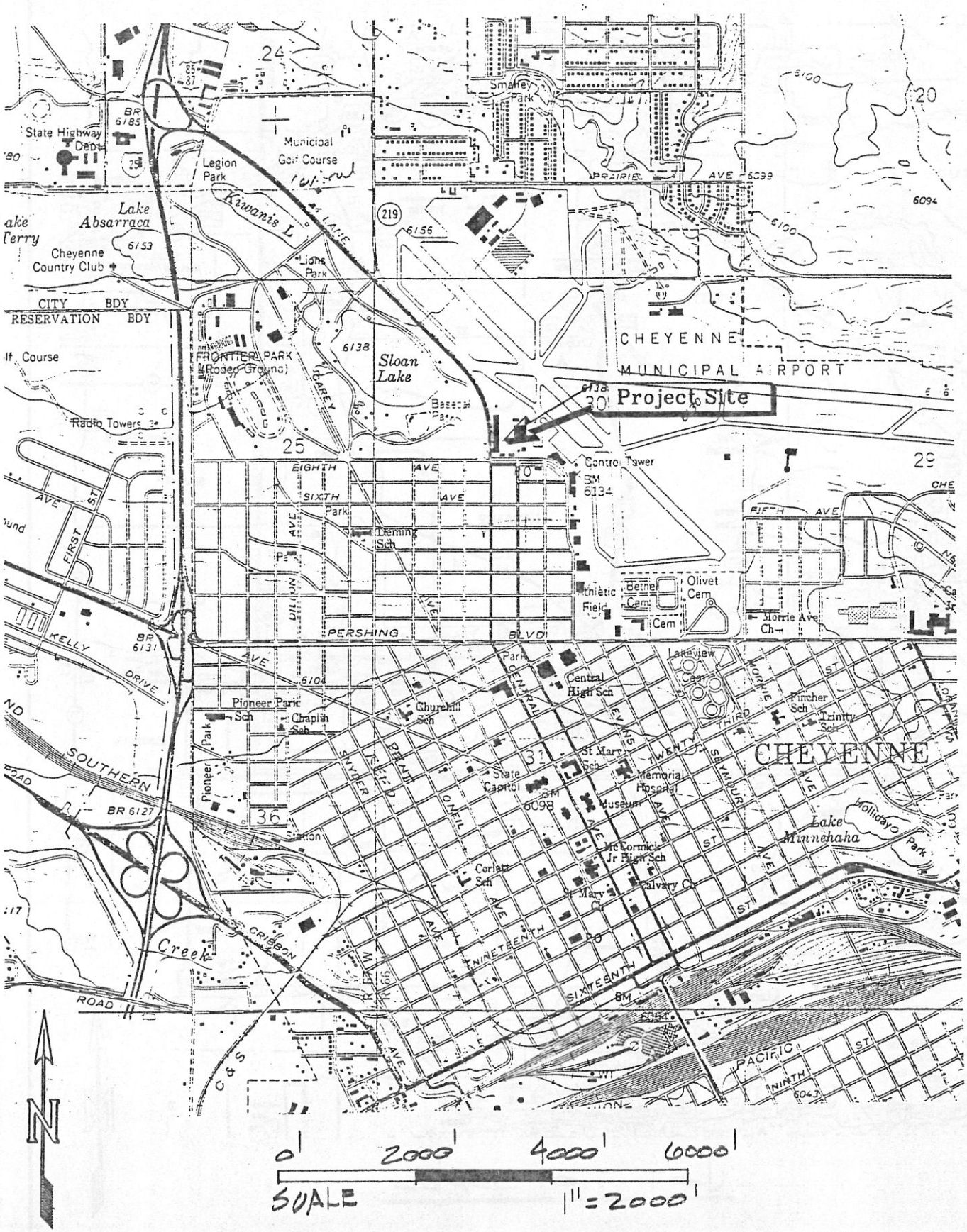


FIGURE 2: VICINITY MAP

LOT 1, BLOCK 4, CHEYENNE AIRPORT ADDITION CHEYENNE, WYOMING

Job # 24947002	Date Nov. 1994	Drawn MR

Empire Laboratories, Inc.
A Division of the Terracon Companies

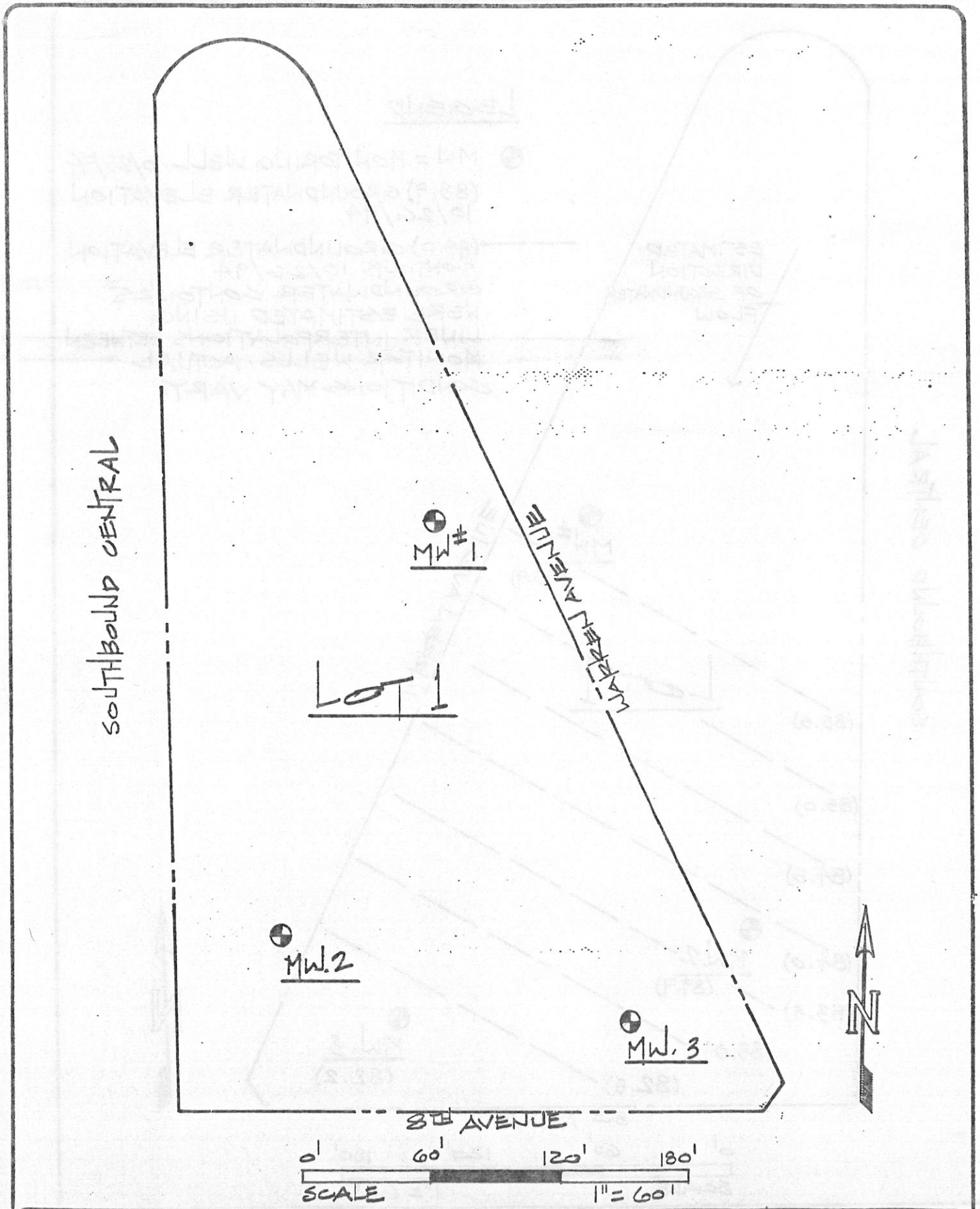


FIGURE 3: GROUNDWATER MW SITE PLAN

LOT 1, BLOCK 4, CHEYENNE AIRPORT ADDITION
CHEYENNE, WYOMING

Job # 24947002	Date Nov. 1994	Drawn MR

Empire Laboratories, Inc.
A Division of the
Terracon Companies

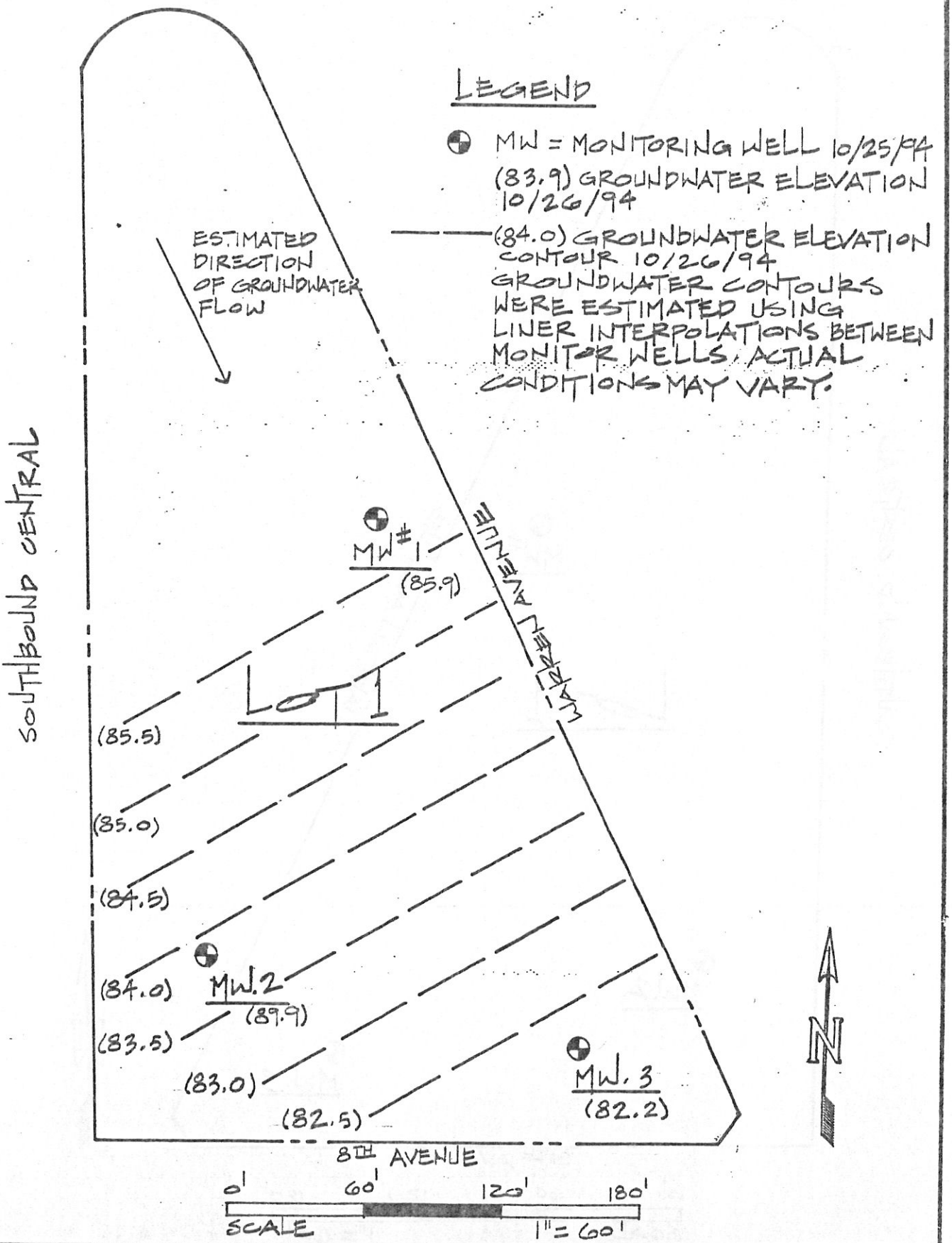


FIGURE 4: GROUNDWATER CONTOUR MAP
LOT 1, BLOCK 4, CHEYENNE AIRPORT ADDITION
CHEYENNE, WYOMING

Job # 24947002	Date Nov. 1994	Drawn MR

Empire Laboratories, Inc.
A Division of the Terracon Companies

APPENDIX B

BORING LOGS

MONITORING WELL # 1

CLIENT: Southwest Partners

ARCHITECT/ENGINEER:

SITE: Lot 1, Block 4, Cheyenne Airport Addition, Cheyenne, Wyoming

PROJECT: Limited Level II E.S.A.

TOP OF CASING ELEV.: 98.9 ft.
APPROX. SURFACE ELEV.: 99.0 ft.

FILL-Silty clayey sand with gravel
Brown, moist

Non-shrink Grout

5.0 — 94.0

SILTY SAND WITH GRAVEL
Tan/gray, dry to moist
Medium dense to dense

Bentonite clay

13.5 — 85.5

Silica sand

WEATHERED SANDSTONE/ CLAYSTONE/SILTSTONE OGALLALA FORMATION
Tan/gray, moist
Moderately hard to hard

21.5 — 77.5

BOTTOM OF BORING

DEPTH (FT.)	USCS SYMBOL	NUMBER	TYPE	RECOVERY	SPT - N BLOWS / FT.	MOISTURE, %	UNCONFINED STRENGTH	PID READINGS PPM
5		1	SS	12"	19			1
		2	SS	12"	14			
10		3	SS	12"	50			1
		4	SS	12"	50			
15		5	SS	12"	9			1
		6	SS	12"	15			
20		7	SS	12"	18			1
		8	SS	12"	36			

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL AND ROCK TYPES: IN-SITU, THE TRANSITION MAY BE GRADUAL.

BOREHOLE DIA.: 6.0 in
WELL DIA.: 2.0 in — Lock Provided

WATER LEVEL OBSERVATIONS

WL	▽ None	W.D.	▼ 13.0'	T.O.C.
WL			top of	casing
WL	Water checked 1 day A.B.			

Empire Laboratories Incorporated
Division of Terracon

BORING STARTED	10-25-94		
BORING COMPLETED	10-25-94		
RIG	CME-55	FOREMAN	DAR
APPROVED	SAR	JOB #	24947002

MONITORING WELL # 2

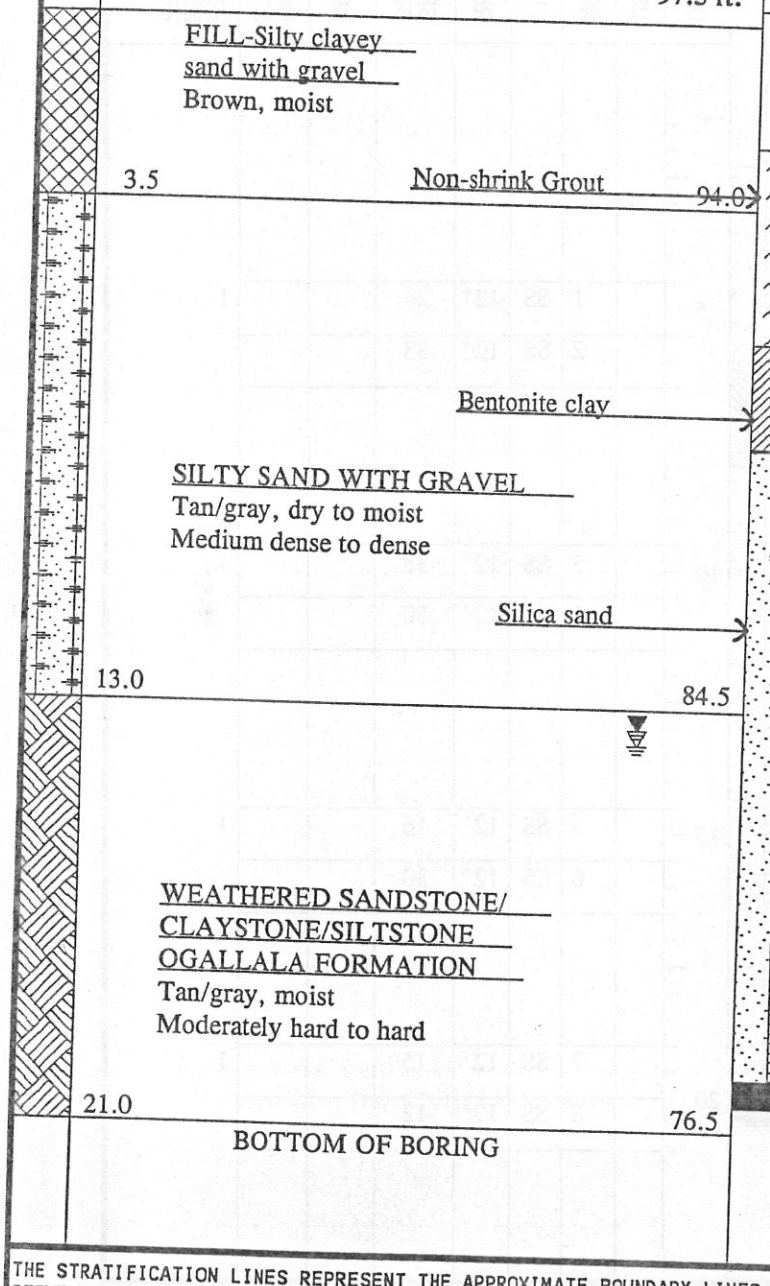
CLIENT: Southwest Partners

ARCHITECT/ENGINEER:

SITE: Lot 1, Block 4, Cheyenne Airport Addition, Cheyenne, Wyoming

PROJECT: Limited Level II E.S.A.

TOP OF CASING ELEV.: 97.3 ft.
APPROX. SURFACE ELEV.: 97.5 ft.



DEPTH (FT.)	USCS SYMBOL	NUMBER	TYPE	RECOVERY	SPT - N BLOWS / FT.	MOISTURE, %	UNCONFINED STRENGTH	PID READINGS PPM
5		1	SS	12"	8			1
		2	SS	12"	23			
10		3	SS	12"	37			1
		4	SS	12"	44			
15		5	SS	12"	16			1
		6	SS	12"	41			
20		7	SS	12"	10			1
		8	SS	12"	40			

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL AND ROCK TYPES: IN-SITU, THE TRANSITION MAY BE GRADUAL.

BOREHOLE DIA.: 6.0 in
WELL DIA.: 2.0 in Lock Provided

WATER LEVEL OBSERVATIONS

WL	▽ 13.7'	W.D.	▽ 13.4'	T.O.C.
WL			top of	casing
WL	Water checked 1 day A.B.			

Empire Laboratories Incorporated
Division of Terracon

BORING STARTED	10-25-94
BORING COMPLETED	10-25-94
RIG: CME-55	FOREMAN: DAR
APPROVED: SAR	JOB #: 24947002

MONITORING WELL # 3

CLIENT: Southwest Partners

ARCHITECT/ENGINEER:

SITE: Lot 1, Block 4, Cheyenne Airport Addition, Cheyenne, Wyoming

PROJECT: Limited Level II E.S.A.

TOP OF CASING ELEV.: 97.9 ft.
APPROX. SURFACE ELEV.: 98.5 ft.

GRAPHIC LOG	DESCRIPTION	WELL DETAIL	DEPTH (FT.)	SAMPLES: USCS SYMBOL	SAMPLES: NUMBER	SAMPLES: TYPE	SAMPLES: RECOVERY	TESTS: SPT - N BLOWS / FT.	TESTS: MOISTURE, %	TESTS: UNCONFINED STRENGTH	TESTS: PID READINGS PPM
	FILL-Silty clayey sand with gravel Brown, moist	Non-shrink Grout									
	4.0	94.5									
		Bentonite clay	5		1	SS	12"	24			1
					2	SS	12"	33			
	SILTY SAND WITH GRAVEL Tan/gray, dry to moist Medium dense to dense		10		3	SS	12"	38			1
		Silica sand			4	SS	12"	50			
	13.0	85.5									
	WEATHERED SANDSTONE/ CLAYSTONE/SILTSTONE OGALLALA FORMATION Tan/gray, moist, moderately hard		15		5	SS	12"	16			1
					6	SS	12"	30			
			20		7	SS	12"	15			1
					8	SS	12"	12			
	21.0	77.5									
	BOTTOM OF BORING										

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL AND ROCK TYPES: IN-SITU, THE TRANSITION MAY BE GRADUAL.

BOREHOLE DIA.: 6.0 in
WELL DIA.: 2.0 in Lock Provided

WATER LEVEL OBSERVATIONS				
WL	▽ 18.8'	W.D.	▽ 15.7'	T.O.C.
WL			top of	casing
WL	Water checked 1 day A.B.			

Empire Laboratories Incorporated
Division of Terracon

BORING STARTED	10-25-94		
BORING COMPLETED	10-25-94		
RIG	CME-55	FOREMAN	DAR
APPROVED	SAR	JOB #	24947002

APPENDIX C

FIELD METHODS

FIELD METHODS

Groundwater Monitoring Wells

The groundwater monitoring wells (GMW) were completed at the subject property on October 25, 1994. The locations of the GMW borings are shown on Figure 3 in Appendix A. The drilling services were performed by a three-man crew consisting of a driller, a driller's helper and a geotechnical engineer. The Empire engineer interpreted subsurface conditions and collected soil samples during drilling services. The GMW were completed with a truck-mounted, drilling rig equipped with a hydraulic head employed in drilling and sampling operations. The GMW were advanced using 3.25-inch inside diameter (I.D.) hollow-stem augers. The augers were advanced to depths of between approximately 20 and 22 feet below the ground surface. Excess auger cuttings were left on site.

Field logs of each boring were prepared by the Empire engineer. These logs contain visual-tactual classifications of the materials encountered during drilling, as well as the driller's interpretation of subsurface conditions based on drilling resistance and difficulty.

Soil Sampling

Soil samples were obtained from GMW Nos. 1 through 3 using split-spoon sampling techniques. Soils encountered while drilling were screened on site for organic vapors with a photoionization detector (PID) to aid in determining potential zones of organic vapor contamination. Soil samples were collected at various intervals for ambient temperature headspace analysis (ATHA). The ATHA procedure consisted of transferring the soil samples from the split-spoon samplers into Ziplock bags such that the bags were approximately one-third full. The sample was allowed to equilibrate with the container headspace for approximately 15 minutes. The probe of the PID was then used to pierce the bag and the maximum observed reading was recorded. ATHA results are

summarized on the boring logs in Appendix B. ATHA results are considered only a qualitative field measurement of contamination and should not be interpreted as quantitative analyses.

Groundwater Sampling

Groundwater samples were collected from GMW Nos. 1 through 3 on October 26, 1994 with disposable bailers and placed in sample containers. The sample containers consisted of 40-ml vials with Teflon septa as well as 1-L amber glass bottles. The groundwater samples were placed in a cooler with ice and transported to Technology Laboratory, Inc. in Fort Collins, Colorado for chemical analyses.

Cleaning Operations

Sampling equipment, drilling equipment and the drill rig were cleaned with a high-pressure, hot-water washer prior to entering the site and prior to leaving the site. The sampling equipment were also cleaned between borings using a high-pressure, hot-water washer. Wash water from cleaning of the drilling equipment was discharged on site.

Surveying

The GMWs were surveyed after completing the subsurface exploration. The GMW locations and elevations were surveyed by Empire. The elevations of the GMWs are relative to the temporary benchmark consisting of the north bonnet bolt of the fire hydrant located along the south portion of the site (Site Plan Figure 3 in Appendix A).

Safety Protocol

Field services were performed by Empire personnel using level D personal protective procedures. These procedures included the use of hard hats, rubber gloves, and steel toed boots by drilling personnel.

APPENDIX D

TABLES

TABLE 1
SUMMARY OF GROUNDWATER LABORATORY TESTS RESULTS
EPA TEST METHOD 8260

CLIENT: Southwest Partners
PROJECT: Lot 1, Block 4, Cheyenne Airport Addition
PROJECT NO: 24947002

CAS Number	Compound Analyzed	MW-1 (ug/L)	MW-2 (ug/L)	MW-3 (ug/L)	Wyoming Groundwater Standards (ug/L)
75-35-4	1,1-Dichloroethene	16.6*	<0.5	<0.5	7.0
75-34-3	1,1-Dichloroethane	20.7	<0.5	<0.5	3,000
71-55-6	1,1,1-Trichloroethane	39.3	<0.5	<0.5	200
107-06-2	1,2-Dichloroethane	5.8*	5.8*	<0.5	5.0
79-01-6	Trichloroethene	5.3*	5.3*	<0.5	5.0
106-93-4	1,2 Dibromoethane	1.1	1.1	<0.5	NR
91-20-3	Naphthalene	1.5	5.6	2.6	1,300+
127-18-4	Tetrachloroethene	<0.5	108*	<0.5	5
100-41-4	Ethylbenzene	<0.5	0.9	1.2	700
---	Total Xylenes	<0.5	1.6	6.9	10,000
108-67-8	1,3,5-Trimethylbenzene	<0.5	2.8	0.8	10+
95-63-6	1,2,4-Trimethylbenzene	<0.5	9.6	3.0	16+
98-06-6	Tert-butylbenzene	<0.5	1.3	0.6	NR
71-43-2	Benzene	<0.5	<0.5	2.2	5
108-88-3	Toluene	<0.5	<0.5	5.5	1,000

NOTES:
1. The sample locations are shown on the Site Plan, Figure 3 in Appendix A.
2. + Denotes DWEL = Wyoming Drinking Water Equivalent Levels, Groundwater Standards.
3. Wyoming Groundwater Standards, MCL = Maximum contaminant levels unless otherwise indicated with an (+) for DWEL.
4. NR = Not regulated.
5. *Denotes exceeds Wyoming Groundwater Standard

APPENDIX E

LABORATORY REPORT

TECHNOLOGY LABORATORY, INC.

CENTRE FOR ADVANCED TECHNOLOGY
2401 Research Boulevard, Suite 204
Fort Collins, Colorado 80526
(303) 490-1414

WATER ANALYSIS REPORT

EMPIRE LABORATORIES, INC.
301 North Howes
Fort Collins, Colorado 80521

Sample ID: MW No. 1 H_2O

Lab ID: 8466-1

Sampled: 10/26/94
Received: 10/26/94
Analyzed: 10/26/94

Project No: 24947002

Compound Analyzed	Concentration (mg/L)	Method (Detection Limit)
TVPH (Purgeable)	<0.5	EPA-8015 Modified (0.5 mg/L)
TEPH (Extractable)	<0.5	EPA-8015 Modified (0.5 mg/L)
Oil and Grease	<5	EPA-413.1 (5 mg/L)

Bill Emery
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WATER ANALYSIS REPORT

EMPIRE LABORATORIES, INC.
301 North Howes
Fort Collins, Colorado 80521

Sample ID: MW No. 1 H_2O

Lab ID: 8466-1

Sampled: 10/26/94
Received: 10/26/94
Analyzed: 10/27/94

Project No.: 24947002

Method: EPA-8260

CAS Number	Compound Analyzed	Concentration µg/L	CAS Number	Compound Analyzed	Concentration µg/L
75-01-4	Vinylchloride	<0.5	127-18-4	Tetrachloroethene	<0.5
74-87-3	Chloromethane	<0.5	106-93-4	1,2-dibromoethane	**1.1**
74-83-9	Bromomethane	<0.5	124-48-1	Dibromochloromethane	<0.5
75-00-3	Chloroethane	<0.5	108-90-7	Chlorobenzene	<0.5
75-69-4	Trichlorofluoromethane	<0.5	630-20-6	1,1,1,2-tetrachloroethane	<0.5
75-35-4	1,1-Dichloroethene	**16.6**	100-41-4	Ethylbenzene	<0.5
156-60-5	trans-1,2-dichloroethenecis-	<0.5		Total Xylenes	<0.5
156-59-2	1,2-dichloroethene	<0.5	100-42-5	Styrene	<0.5
75-09-2	Methylene Chloride	<0.5	75-25-2	Bromoform	<0.5
75-34-3	1,1-Dichloroethane	**20.7**	79-34-5	1,1,2,2-Tetrachloroethane	<0.5
74-97-5	Bromochloromethane	<0.5	98-82-8	Isopropylbenzene	<0.5
67-66-3	Chloroform	<0.5	108-86-1	Bromobenzene	<0.5
71-55-6	1,1,1-Trichloroethane	**39.3**	95-49-8	2-chlorotoluene	<0.5
56-23-5	Carbon Tetrachloride	<0.5	106-43-4	4-chlorotoluene	<0.5
71-43-2	Benzene	<0.5	108-67-8	1,3,5-trimethylbenzene	<0.5
107-06-2	1,2-Dichloroethane	**5.8**	95-63-6	1,2,4-trimethylbenzene	<0.5
79-01-6	Trichloroethene	**5.3**	98-06-6	tert-butylbenzene	<0.5
78-87-5	1,2-Dichloropropane	<0.5	135-98-8	sec-butylbenzene	<0.5
75-27-4	Bromodichloromethane	<0.5	106-46-7	1,4-dichlorobenzene	<0.5
74-95-3	Dibromomethane	<0.5	541-73-1	1,3-dichlorobenzene	<0.5
108-88-3	Toluene	<0.5	99-87-6	4-isopropyltoluene	<0.5
79-00-5	1,1,2-Trichloroethane	<0.5	104-51-8	n-butylbenzene	<0.5
78-87-5	1,3-dichloropropane	<0.5	87-61-6	1,2,3-trichlorobenzene	<0.5
594-20-7	2,2-dichloropropane	<0.5	120-82-1	1,2,4-trichlorobenzene	<0.5
563-58-6	1,1-dichloropropene	<0.5	87-68-3	Hexachlorobutadiene	<0.5
542-75-6	cis-1,3-dichloropropene	<0.5	91-20-3	Naphthalene	**1.5**
542-75-6	trans-1,3-dichloropropene	<0.5	95-50-1	1,2-Dichlorobenzene	<0.5

TECHNOLOGY LABORATORY, INC.

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WATER ANALYSIS REPORT

Sample ID:	MW No. 1 H_2O	Project No.:	24947002
Lab ID:	8466-1	Method:	EPA-8260

SURROGATE RECOVERIES

Compound	% Recovery	% Rec. Limits
Dibromofluoromethane	101	76-114
Toluene-d_8	104	88-110
4-Bromofluorobenzene	108	86-115

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WATER ANALYSIS REPORT

EMPIRE LABORATORIES, INC.
301 North Howes
Fort Collins, Colorado 80521

Sample ID: MW No. 1 H_2O

Lab ID: 8466-1

Sampled: 10/26/94
Received: 10/26/94
Analyzed: 10/27/94

Project No.: 24947002

Compound Analyzed	Concentration (mg/L)	Method
Dissolved Arsenic	<0.005	EPA-7060
Dissolved Barium	<0.1	EPA-7080
Dissolved Cadmium	<0.01	EPA-7130
Dissolved Chromium	<0.01	EPA-7190
Dissolved Selenium	<0.005	EPA-7741
Dissolved Silver	<0.01	EPA-7760
Dissolved Mercury	<0.005	EPA-7470
Dissolved Lead	<0.003	EPA-7420

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WATER ANALYSIS REPORT

EMPIRE LABORATORIES, INC.
301 North Howes
Fort Collins, Colorado 80521

Sample ID: MW No. 1 H_2O

Lab ID: 8466-1

Sampled: 10/26/94
Received: 10/26/94
Analyzed: 10/28/94

Project No.: 24947002

Method: EPA-8080

Cas Number	Compound Analyzed	Concentration µg/L
12674-11-2	Aroclor-1016	<1.0
11104-28-2	Aroclor-1221	<1.0
11141-16-5	Aroclor-1232	<1.0
53469-21-9	Aroclor-1242	<1.0
12672-29-6	Aroclor-1248	<1.0
11097-69-1	Aroclor-1254	<1.0
11096-82-5	Aroclor-1260	<1.0

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WATER ANALYSIS REPORT

EMPIRE LABORATORIES, INC.
301 North Howes
Fort Collins, Colorado 80521

Sample ID: MW No. 2 H_2O

Lab ID: 8466-2

Sampled: 10/26/94
Received: 10/26/94
Analyzed: 10/26/94

Project No: 24947002

Compound Analyzed	Concentration (mg/L)	Method (Detection Limit)
TVPH (Purgeable)	<0.5	EPA-8015 Modified (0.5 mg/L)
TEPH (Extractable)	<0.5	EPA-8015 Modified (0.5 mg/L)
Oil and Grease	<5	EPA-413.1 (5 mg/L)

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WATER ANALYSIS REPORT

EMPIRE LABORATORIES, INC.
301 North Howes
Fort Collins, Colorado 80521

Sample ID: MW No. 2 H_2O

Lab ID: 8466-2

Sampled: 10/26/94
Received: 10/26/94
Analyzed: 10/27/94

Project No.: 24947002

Method: EPA-8260

CAS Number	Compound Analyzed	Concentration µg/L	CAS Number	Compound Analyzed	Concentration µg/L
75-01-4	Vinylchloride	<0.5	127-18-4	Tetrachloroethene	**108**
74-87-3	Chloromethane	<0.5	106-93-4	1,2-dibromoethane	<0.5
74-83-9	Bromomethane	<0.5	124-48-1	Dibromochloromethane	<0.5
75-00-3	Chloroethane	<0.5	108-90-7	Chlorobenzene	<0.5
75-69-4	Trichlorofluoromethane	<0.5	630-20-6	1,1,1,2-tetrachloroethane	<0.5
75-35-4	1,1-Dichloroethene	<0.5	100-41-4	Ethylbenzene	**0.9**
156-60-5	trans-1,2-dichloroethenecis-	<0.5		Total Xylenes	**1.6**
156-59-2	1,2-dichloroethene	<0.5	100-42-5	Styrene	<0.5
75-09-2	Methylene Chloride	<0.5	75-25-2	Bromoform	<0.5
75-34-3	1,1-Dichloroethane	<0.5	79-34-5	1,1,2,2-Tetrachloroethane	<0.5
74-97-5	Bromochloromethane	<0.5	98-82-8	Isopropylbenzene	<0.5
67-66-3	Chloroform	<0.5	108-86-1	Bromobenzene	<0.5
71-55-6	1,1,1-Trichloroethane	<0.5	95-49-8	2-chlorotoluene	<0.5
56-23-5	Carbon Tetrachloride	<0.5	106-43-4	4-chlorotoluene	<0.5
71-43-2	Benzene	<0.5	108-67-8	1,3,5-trimethylbenzene	**2.8**
107-06-2	1,2-Dichloroethane	<0.5	95-63-6	1,2,4-trimethylbenzene	**9.6**
79-01-6	Trichloroethene	<0.5	98-06-6	tert-butylbenzene	**1.3**
78-87-5	1,2-Dichloropropane	<0.5	135-98-8	sec-butylbenzene	<0.5
75-27-4	Bromodichloromethane	<0.5	106-46-7	1,4-dichlorobenzene	<0.5
74-95-3	Dibromomethane	<0.5	541-73-1	1,3-dichlorobenzene	<0.5
108-88-3	Toluene	<0.5	99-87-6	4-isopropyltoluene	<0.5
79-00-5	1,1,2-Trichloroethane	<0.5	104-51-8	n-butylbenzene	<0.5
78-87-5	1,3-dichloropropane	<0.5	87-61-6	1,2,3-trichlorobenzene	<0.5
594-20-7	2,2-dichloropropane	<0.5	120-82-1	1,2,4-trichlorobenzene	<0.5
563-58-6	1,1-dichloropropene	<0.5	87-68-3	Hexachlorobutadiene	<0.5
542-75-6	cis-1,3-dichloropropene	<0.5	91-20-3	Naphthalene	**5.6**
542-75-6	trans-1,3-dichloropropene	<0.5	95-50-1	1,2-Dichlorobenzene	<0.5

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WATER ANALYSIS REPORT

Sample ID: MW No. 2 H_2O

Lab ID: 8466-2

Project No.: 24947002

Method: EPA-8260

SURROGATE RECOVERIES

Compound	% Recovery	% Rec. Limits
Dibromofluoromethane	102	76-114
Toluene-d_8	104	88-110
4-Bromofluorobenzene	110	86-115

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WATER ANALYSIS REPORT

EMPIRE LABORATORIES, INC.
301 North Howes
Fort Collins, Colorado 80521

Sampled: 10/26/94
Received: 10/26/94
Analyzed: 10/27/94

Sample ID: MW No. 2 H_2O

Project No.: 24947002

Lab ID: 8466-2

Compound Analyzed	Concentration (mg/L)	Method
Dissolved Arsenic	<0.005	EPA-7060
Dissolved Barium	<0.1	EPA-7080
Dissolved Cadmium	<0.01	EPA-7130
Dissolved Chromium	<0.01	EPA-7190
Dissolved Selenium	<0.005	EPA-7741
Dissolved Silver	<0.01	EPA-7760
Dissolved Mercury	<0.005	EPA-7470
Dissolved Lead	<0.003	EPA-7420

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WATER ANALYSIS REPORT

EMPIRE LABORATORIES, INC.
301 North Howes
Fort Collins, Colorado 80521

Sampled: 10/26/94
Received: 10/26/94
Analyzed: 10/28/94

Sample ID: MW No. 2 H_2O

Project No.: 24947002

Lab ID: 8466-2

Method: EPA-8080

Cas Number	Compound Analyzed	Concentration µg/L
12674-11-2	Aroclor-1016	<1.0
11104-28-2	Aroclor-1221	<1.0
11141-16-5	Aroclor-1232	<1.0
53469-21-9	Aroclor-1242	<1.0
12672-29-6	Aroclor-1248	<1.0
11097-69-1	Aroclor-1254	<1.0
11096-82-5	Aroclor-1260	<1.0

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WATER ANALYSIS REPORT

EMPIRE LABORATORIES, INC.
301 North Howes
Fort Collins, Colorado 80521

Sampled: 10/26/94
Received: 10/26/94
Analyzed: 10/26/94

Sample ID: MW No. 3 H_2O

Project No: 24947002

Lab ID: 8466-3

Compound Analyzed	Concentration (mg/L)	Method (Detection Limit)
TVPH (Purgeable)	<0.5	EPA-8015 Modified (0.5 mg/L)
TEPH (Extractable)	<0.5	EPA-8015 Modified (0.5 mg/L)
Oil and Grease	<5	EPA-413.1 (5 mg/L)

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WATER ANALYSIS REPORT

EMPIRE LABORATORIES, INC.
301 North Howes
Fort Collins, Colorado 80521

Sample ID: MW No. 3 H_2O

Lab ID: 8466-3

Sampled: 10/26/94
Received: 10/26/94
Analyzed: 10/27/94

Project No.: 24947002

Method: EPA-8260

CAS Number	Compound Analyzed	Concentration µg/L	CAS Number	Compound Analyzed	Concentration µg/L
75-01-4	Vinylchloride	<0.5	127-18-4	Tetrachloroethene	<0.5
74-87-3	Chloromethane	<0.5	106-93-4	1,2-dibromoethane	<0.5
74-83-9	Bromomethane	<0.5	124-48-1	Dibromochloromethane	<0.5
75-00-3	Chloroethane	<0.5	108-90-7	Chlorobenzene	<0.5
75-69-4	Trichlorofluoromethane	<0.5	630-20-6	1,1,1,2-tetrachloroethane	<0.5
75-35-4	1,1-Dichloroethene	<0.5	100-41-4	Ethylbenzene	**1.2**
156-60-5	trans-1,2-dichloroethene	<0.5		Total Xylenes	**6.9**
156-59-2	cis-1,2-dichloroethene	<0.5	100-42-5	Styrene	<0.5
75-09-2	Methylene Chloride	<0.5	75-25-2	Bromoform	<0.5
75-34-3	1,1-Dichloroethane	<0.5	79-34-5	1,1,2,2-Tetrachloroethane	<0.5
74-97-5	Bromochloromethane	<0.5	98-82-8	Isopropylbenzene	<0.5
67-66-3	Chloroform	<0.5	108-86-1	Bromobenzene	<0.5
71-55-6	1,1,1-Trichloroethane	<0.5	95-49-8	2-chlorotoluene	<0.5
56-23-5	Carbon Tetrachloride	<0.5	106-43-4	4-chlorotoluene	<0.5
71-43-2	Benzene	**2.2**	108-67-8	1,3,5-trimethylbenzene	**0.8**
107-06-2	1,2-Dichloroethane	<0.5	95-63-6	1,2,4-trimethylbenzene	**3.0**
79-01-6	Trichloroethene	<0.5	98-06-6	tert-butylbenzene	**0.6**
78-87-5	1,2-Dichloropropane	<0.5	135-98-8	sec-butylbenzene	<0.5
75-27-4	Bromodichloromethane	<0.5	106-46-7	1,4-dichlorobenzene	<0.5
74-95-3	Dibromomethane	<0.5	541-73-1	1,3-dichlorobenzene	<0.5
108-88-3	Toluene	**5.5**	99-87-6	4-isopropyltoluene	<0.5
79-00-5	1,1,2-Trichloroethane	<0.5	104-51-8	n-butylbenzene	<0.5
78-87-5	1,3-dichloropropane	<0.5	87-61-6	1,2,3-trichlorobenzene	<0.5
594-20-7	2,2-dichloropropane	<0.5	120-82-1	1,2,4-trichlorobenzene	<0.5
563-58-6	1,1-dichloropropene	<0.5	87-68-3	Hexachlorobutadiene	<0.5
542-75-6	cis-1,3-dichloropropene	<0.5	91-20-3	Naphthalene	**2.6**
542-75-6	trans-1,3-dichloropropene	<0.5	95-50-1	1,2-Dichlorobenzene	<0.5

TECHNOLOGY LABORATORY, INC.

CENTRE FOR ADVANCED TECHNOLOGY
2401 Research Boulevard, Suite 204
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WATER ANALYSIS REPORT

Sample ID: MW No. 3 H_2O Project No.: 24947002

Lab ID: 8466-3 Method: EPA-8260

SURROGATE RECOVERIES

Compound	% Recovery	% Rec. Limits
Dibromofluoromethane	98	76-114
Toluene-d_8	104	88-110
4-Bromofluorobenzene	110	86-115

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WATER ANALYSIS REPORT

EMPIRE LABORATORIES, INC.
301 North Howes
Fort Collins, Colorado 80521

Sample ID: MW No. 3 H_2O

Lab ID: 8466-3

Sampled: 10/26/94
Received: 10/26/94
Analyzed: 10/27/94

Project No.: 24947002

Compound Analyzed	Concentration (mg/L)	Method
Dissolved Arsenic	<0.005	EPA-7060
Dissolved Barium	<0.1	EPA-7080
Dissolved Cadmium	<0.01	EPA-7130
Dissolved Chromium	<0.01	EPA-7190
Dissolved Selenium	<0.005	EPA-7741
Dissolved Silver	<0.01	EPA-7760
Dissolved Mercury	<0.005	EPA-7470
Dissolved Lead	<0.003	EPA-7420

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WATER ANALYSIS REPORT

EMPIRE LABORATORIES, INC.
301 North Howes
Fort Collins, Colorado 80521

Sample ID: MW No. 3 H_2O

Lab ID: 8466-3

Sampled: 10/26/94
Received: 10/26/94
Analyzed: 10/28/94

Project No.: 24947002

Method: EPA-8080

Cas Number	Compound Analyzed	Concentration µg/L
12674-11-2	Aroclor-1016	<1.0
11104-28-2	Aroclor-1221	<1.0
11141-16-5	Aroclor-1232	<1.0
53469-21-9	Aroclor-1242	<1.0
12672-29-6	Aroclor-1248	<1.0
11097-69-1	Aroclor-1254	<1.0
11096-82-5	Aroclor-1260	<1.0

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THE STATE OF WYOMING

JIM GERINGER
GOVERNOR

Department of Environmental Quality

Herschler Building ● 122 West 25th Street ● Cheyenne, Wyoming 82002

ADMINISTRATION	ABANDONED MINES	AIR QUALITY	INDUSTRIAL SITING	LAND QUALITY	SOLID & HAZARDOUS WASTE	WATER QUALITY
(307) 777-7758	(307) 777-6145	(307) 777-7391	(307) 777-7368	(307) 777-7756	(307) 777-7752	(307) 777-7781
FAX 777-7682	FAX 634-0799	FAX 777-7682	FAX 777-6937	FAX 634-0799	FAX 777-5973	FAX 777-5973

September 27, 1995

Scott M. Nelson
Executive Vice President and General Counsel
Blood Systems, Inc.
6210 E. Oak St.
P.O. Box 1867
Scottsdale, AZ 85252-1867

Re: Lot 1, Block 4, Cheyenne Airport Addition
August 10, 1995, Blood Systems' Letter

Dear Mr. Nelson:

The Wyoming Department of Environmental Quality, Water Quality Division (WDEQ/WQD) has reviewed the referenced letter. I did speak with Bob Roberson in regards to this matter. The WDEQ/WQD does concur that the concentration levels of chlorinated solvents and the other contaminants that were sampled during the Phase 1 study exceed State Groundwater Standards, but remediation activities are not warranted at this time. The site characterization and sampling that was conducted was not extensive enough to determine the location of the source; although, it was proposed that the source was located upgradient and northwest of the site.

Based upon previous investigations, WDEQ/WQD is aware of chlorinated solvent contamination in the area and beneath the property. However, the WDEQ has not identified the source(s) of the contamination. Please be advised that WDEQ's files containing information on the contamination are available for inspection by Blood Systems, Inc. representatives.

WDEQ/WQD can't confirm written statement No. 3 outlined on page 2 of your letter. WDEQ/WQD doesn't have control over all situations that may require a current and/or future owner to be responsible for site remediation. Additional investigations in the future may reveal extensively contaminated areas that would require remedial actions under EPA or State jurisdiction (i.e., CERCLA, RCRA, etc.).

WDEQ/WQD is available to discuss further any topics regarding this matter. Please do not hesitate to call about any questions that you may have.

Sincerely,

Phillip Stump

Phillip Stump
Senior Environmental Analyst

PS:ks
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cc: Kevin Frederick, Supervisor, Groundwater Pollution Control Program

Blood Systems, Inc.

6210 E. Oak St. / P.O. Box 1867 / Scottsdale, AZ 85252-1867
(602) 946-4201 / FAX (602) 941-2198

August 10, 1995

Mr. Phil Stump
Wyoming Department of Environmental Quality
Water Quality Division
122 W. 25th Street
Herschler Bldg., Fourth Floor - West Wing
Cheyenne, WY 82002

Re: Lot 1, Block 4, Cheyenne Airport Addition
Cheyenne, Wyoming

Dear Mr. Stump:

I am writing on behalf of Blood Systems, Inc., dba United Blood Services, a non-profit corporation. United Blood Services in Cheyenne, Wyoming recently purchased a vacant parcel of property to construct a new blood center. The property is next to the Cheyenne airport and located north of 8th Avenue, west of Warren Avenue and east of Central Avenue. At the present time, we are applying for financing in which the Cheyenne property will serve as collateral. In connection with our application for financing, the bank has reviewed the environmental reports relating to the property. I believe that Mr. Bob Roberson from Bank One-Arizona called you last week to discuss these matters.

Prior to purchasing the property in Cheyenne, a Phase I Environmental Site Assessment was performed by Inberg-Miller Engineers. Based on the information obtained by the Phase I study, we contracted with Empire Laboratories, Inc. ("Empire") to conduct a Level II Site Assessment. Following the Level II study, Empire contacted the Wyoming Department of Environmental Quality/Water Quality Division ("WDEQ") to ascertain the significance of the levels of PCE, and concentrations of 1,1-dichoroethene, 1,2-dichloroethane and trichloroethene contamination observed in the groundwater samples collected at the property. The findings of the Empire Level II study were discussed with WDEQ. The Empire study concluded that based on groundwater flow direction, it appears that the PCE contamination was migrating onto the property from an upgradient source, i.e., northwest of the site. A representative of WDEQ confirmed to Empire that while PCE levels were significant, WDEQ has no plans to take action to remediate the contamination. With respect to the other contaminants observed in the groundwater samples, WDEQ's opinion was that the

levels of contamination were minimal and/or not significant and did not warrant remediation activities.

To assist United Blood Services in securing financing, Bank One has requested that we seek confirmation from WDEQ on the following matters:

1. WDEQ has confirmed that groundwater contamination is present in the general area, which includes the groundwater beneath the subject property.

2. WDEQ has no documentation and has no indication that past and/or present activities on the subject property have caused and/or contributed to groundwater contamination in the area or beneath the subject property.

3. WDEQ has no plans to take any action to remediate the contamination which is present in groundwater beneath the site and that the current, and/or future owner would not be held responsible for site remediation.

I believe that Mr. Roberson and you discussed all of these points, and I am merely following up to get a letter from you confirming the points so that we can proceed with the financing.

On behalf of United Blood Services, I appreciate your assistance in this matter. If you have any questions please let me know.

Sincerely,

Scott M Nelson

SCOTT M. NELSON
Executive Vice President
and General Counsel

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